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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Tatsutoshi Kitajima

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EXAMINER

NGUYEN, LUONG TRUNG

ART UNIT

PAPER NUMBER

2622

NOTIFICATION DATE

DELIVERY MODE

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ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/796,022	Applicant(s) KITAJIMA, TATSUTOSHI	
	Examiner LUONG T. NGUYEN	Art Unit 2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 February 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☒ Claim(s) 11-14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed on 2/09/2009 have been fully considered but they are not persuasive.

In re page 9, Applicant argues that claim 1 is amended to remove the alternative limitation “or” and that the features “shake of the digital camera,” “movement of the subject,” and “absence of a blur” must all be considered in applying the prior art.

In response, regarding claim 1, the Applicant amended claim 1 with limitation “to determine whether a difference in sharpness corresponding to different exposure times of the plurality of imaging data indicates **one of** a shake of the digital camera, a movement of the subject, and absence of a blur based on the compared sharpness.” The Examiner considers that since Applicant uses limitation “**one of**” in the limitation “to determine whether a difference in sharpness corresponding to different exposure times of the plurality of imaging data indicates **one of** a shake of the digital camera a movement of the subject, and absence of a blur based on the compared sharpness,” the prior art need only read on one of the limitations “shake of the digital camera,” “movement of the subject,” and “absence of a blur.”

In re page 9, Applicant argues that Levien fails to disclose or suggest “to determine whether a difference in sharpness corresponding to different exposure times of the plurality of imaging data indicates one of a shake of the digital camera, a movement of the subject, and absence of a blur based on the compared sharpness,” as defined by amended Claim 1.

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In response, regarding claim 1, the Applicant amended claim 1 with limitation “a sharpness comparison device configured to compare sharpness based on the plurality of imaging data obtained by the imaging data obtaining device, and to determine whether a difference in sharpness corresponding to different exposure times of the plurality of imaging data indicates **one of** a shake of the digital camera a movement of the subject, and absence of a blur based on the compared sharpness.”

The Examiner considers that Ejima and Levien do disclose this limitation. Ejima discloses a sharpness comparison device configured to compare sharpness based on the plurality of imaging data obtained by the imaging data obtaining device (compare the spatial frequency components, column 16, lines 20-33; column 22, lines 17 – 30), and a difference in sharpness corresponding to different exposure times (comparing the spatial frequency components of images obtained through different exposure times, column 16, lines 20-33; column 21, lines 59-65; column 22, lines 13-30).

Ejima fails to specifically disclose a sharpness comparison device configured to determine whether a difference in sharpness of the plurality of imaging data indicates **one of** a shake of a digital camera, a movement of a subject, and absence of a blur based on the compared sharpness. However, Levien discloses that uneven sharpness (i.e., a difference in sharpness) can result from motion blur where a moving object has a difference in sharpness (column 1, lines 40-45), which corresponds to limitation “a movement of the subject based on the compared sharpness).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ejima (US 7,176,962) in view of Levien (US 5,524,162).

Regarding claim 1, Ejima discloses a digital camera (digital camera 1, figures 1-3) having an image forming device configured to image a subject by a setup exposure condition and a digital image processing device configured to convert imaging data from the image forming device into a digital image, the digital camera comprising:

a set up device configured to set up a plurality of exposure conditions (capturing images 1, 2 at different shutter speeds (exposure conditions) at step S405, S409, figure 11, column 15, line 47 – column 16, line 45),

an imaging data obtaining device configured to obtain a plurality of imaging data imaged in accordance with the plurality of exposure conditions set by the setup device (capturing images 1, 2 at different shutter speeds (exposure conditions) at step S405, S409, figure 11, column 15, line 47 – column 16, line 45), and

a sharpness comparison device configured to compare sharpness based on the plurality of imaging data obtained by the imaging data obtaining device (compare the spatial frequency components, column 16, lines 20-33; column 22, lines 17 – 30), and a difference in sharpness

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corresponding to different exposure times (comparing the spatial frequency components of images obtained through different exposure times, column 16, lines 20-33; column 21, lines 59-65; column 22, lines 13-30).

Ejima fails to specifically disclose a sharpness comparison device configured to determine whether a difference in sharpness of the plurality of imaging data indicates **one of** a shake of a digital camera, a movement of a subject, and absence of a blur based on the compared sharpness. However, Levien discloses that uneven sharpness (i.e., a difference in sharpness) can result from motion blur where a moving object has a difference in sharpness (column 1, lines 40-45), which corresponds to limitation “a movement of the subject based on the compared sharpness”). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device in Ejima by the teaching of Levien in order to provide a camera which has the capability of detecting motion of a subject based on a difference in sharpness.

Note that claim 1 uses limitation “**one of**” in the limitation “to determine whether a difference in sharpness corresponding to different exposure times of the plurality of imaging data indicates **one of** a shake of the digital camera, a movement of the subject, and absence of a blur based on the compared sharpness.” Therefore, the prior art can only read on **one of** the limitations “shake of the digital camera,” “movement of the subject,” and “absence of a blur.” In this case, the prior art reads on limitation “indicates a movement of the subject based on the compared sharpness.”

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Regarding claim 6, Ejima discloses the digital camera further comprising:

a display device configured to display an image processed by the digital image processing device (LCD 8, figure 2-3, column 5, lines 15-20; column 6, lines 1-5),

wherein a display time to the display device is made constant regardless of an exposure time in the image forming device (since the LCD 8 displays image data reproduced from memory card 25, the display time of image data on LCD 8 is not effected by exposure time in CCD 20, figure 3).

4. Claims 2, 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ejima (US 7,176,962) in view of Levien (US 5,524,162) further in view of Satoh et al. (US 5,708,863).

Regarding claim 2, Ejima and Levien fail to specifically disclose a handshake preventing exposure output device configured to output an exposure time for preventing a blur in an image caused by a shake of the digital camera based on a focal length of a photographic lens in the image forming device, wherein an existence of the camera shake is determined based on the exposure time output by the handshake preventing exposure time output device.

However, Satoh et al. teaches an image blur prevention device for a camera, which teaches the shake determining section 4 determines the current image blur state on the image plane on the basis of photographing focal length (figure 1, column 4, lines 5-44). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device in Ejima and Levien by the teaching of Satoh et al. in order to provide an

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image blur prevention device for a camera, which reduces the influence of camera shakes on photographing operation and exhibits good operability without posing problems when a release time lag occurs (column 1, lines 63-67).

Regarding claim 7, Ejima discloses the digital camera further comprising:

a display device configured to display an image processed by the digital image processing device (LCD 8, figure 2-3, column 5, lines 15-20; column 6, lines 1-5),

wherein a display time to the display device is made constant regardless of an exposure time in the image forming device (since the LCD 8 displays image data reproduced from memory card 25, the display time of image data on LCD 8 is not effected by exposure time in CCD 20, figure 3).

5. Claims 3, 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ejima (US 7,176,962) in view of Levien (US 5,524,162) and Satoh et al. (US 5,708,863) further in view of Ohishi et al. (US 5,713,049).

Regarding claim 3, Ejima, Levien and Satoh et al. fail to specifically disclose a warning device configured to warn of the shake of the digital camera when the existence of the shake of the digital camera is determined. However, Ohishi et al. teaches LCD 3 for displaying information such as camera-shake amount (figure 1, column 4, lines 40-45). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device in Ejima, Levien and Satoh et al. by the teaching of Ohishi et al. in order to

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provide a camera-shake display device for a camera. This camera-shake display device informs various information on the camera-shake to a user of a camera (column 1, lines 34-35).

Regarding claim 8, Ejima discloses the digital camera further comprising:

a display device configured to display an image processed by the digital image processing device (LCD 8, figure 2-3, column 5, lines 15-20; column 6, lines 1-5),

wherein a display time to the display device is made constant regardless of an exposure time in the image forming device (since the LCD 8 displays image data reproduced from memory card 25, the display time of image data on LCD 8 is not effected by exposure time in CCD 20, figure 3).

6. Claims 4, 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ejima (US 7,176,962) in view of Levien (US 5,524,162) and Satoh et al. (US 5,708,863) further in view of Yoshihara et al. (US 5,172,233).

Regarding claim 4, Ejima discloses a strobe is flashed in accordance with shortening the predetermined exposure time (figure 3, column 6, line 65 – column 7, line 3).

Ejima, Levien and Satoh et al. fail to specifically wherein when the existence of a shake of the digital camera is determined, a predetermined exposure time while recording a still image is shortened. However, Yoshihara et al. discloses a still electronic camera, in which in order to prevent blurring of photograph due to camera shaking, the exposure time is shortened to such a

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degree that camera shaking is regarded as negligible (column 1, lines 23 – 28). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device in Ejima, Levien and Satoh et al. by the teaching of Yoshihara et al. in order to obtain a clear photograph with high resolution (column 1, lines 23-25).

Regarding claim 9, Ejima discloses the digital camera further comprising:

a display device configured to display an image processed by the digital image processing device (LCD 8, figure 2-3, column 5, lines 15-20; column 6, lines 1-5),

wherein a display time to the display device is made constant regardless of an exposure time in the image forming device (since the LCD 8 displays image data reproduced from memory card 25, the display time of image data on LCD 8 is not effected by exposure time in CCD 20, figure 3).

7. Claims 5, 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ejima (US 7,176,962) in view of Levien (US 5,524,162) and Satoh et al. (US 5,708,863) further in view of Imada (US 2004/0090532).

Regarding claim 5, Ejima, Levien and Satoh et al. fail to specifically wherein when a movement of the subject is determined to exist, a sensitivity for increasing the output of the imaging data while recording a still image is increased. However, Imada teaches that when it is desired to reduce affects from image blur by increasing the shutter speed, the image-taking sensitivity is set to be higher in accordance with the shutter speed increase (page 1, [005],

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[0012]). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device in Ejima, Levien and Satoh et al. by the teaching of Imada in order to reduce the affects from image blur (page 1, [005]).

Regarding claim 10, Ejima discloses the digital camera further comprising:

a display device configured to display an image processed by the digital image processing device (LCD 8, figure 2-3, column 5, lines 15-20; column 6, lines 1-5),

wherein a display time to the display device is made constant regardless of an exposure time in the image forming device (since the LCD 8 displays image data reproduced from memory card 25, the display time of image data on LCD 8 is not effected by exposure time in CCD 20, figure 3).

Allowable Subject Matter

8. Claims 11-14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to LUONG T. NGUYEN whose telephone number is (571) 272-7315. The examiner can normally be reached on 7:30AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, DAVID L. OMETZ can be reached on (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/L. T. N./
Examiner, Art Unit 2622
05/06/09

/David L. Ometz/
Supervisory Patent Examiner, Art Unit 2622